

User Manual

Widescreen LCD Quad Display Wide 19", 22" screen size



Widescreen LCD Quad Display
Models
RP-W922QD
RP-W819QD



Widescreen Quad Display Drawer
Models
RP-W119QD

4:3 LCD Quad Display 17", 19", 20" screen size





4:3 LCD Quad Display
Models
RP-817QD / RP-919QD / RP-1020QD

4:3 Quad Display Drawer Models
RP-117QD / RP-119QD / RP-120QD

Options: - DC power



Contents

Chapter 1	Getting Started				
·	1.1	Important Safeguards	1		
	1.2	Regulatory Notice	2		
	1.3	Before Installation	3		
	1.4	Unpacking	3		
	1.5	Optional Accessories	3		
	1.6	Peripheral Products	4		
Part 1	Wic	descreen LCD Quad Display			
Chapter 2	RP-	-W922QD & RP-W819QD			
	2.1	Package Contents			
	2.2	Structure Diagram			
	2.3	Installation			
	2.4	Connection	9		
Chapter 3	RP.	-W119QD			
	3.1	Package Contents	10		
	3.2	Structure Diagram	11		
	3.3	How to Use the Slides	12		
	3.4	Connection	13		
Chapter 4	LCI	D Specification	14		
Chapter 5	Din	nensions	15		

Part 2 4:3 LCD Quad Display

Chapter 6	RP-817QD, RP-919QD & RP-1020QD	
	6.1 Package Contents	
	6.2 Structure Diagram	
	6.3 Installation	
	6.4 Connection	19
Chapter 7	RP-117QD, RP-119QD & RP-120QD	
	7.1 Package Contents	
	7.2 Structure Diagram	
	7.3 How to Use the Slides	
	7.4 Connection	23
Chapter 8	LCD Specification	24
Chapter 9	Dimensions	25
Chapter 10	Operation	
	10.1 On-screen Display Operation	26
	10.2 On-screen Menu	
Chapter 11	Quad Operation	
	11.1 Basic System Connection	28
	11.2 Alarm I/O Connection & Operation	29-30
	11.3 Remote Control Connection & Operation	31-35
	11.4 Quad Display Connection	
	11.5 Quad Display On-screen Menu	37-39
	11.6 VCR Operations	
	11.7 Quad Display Specification	40
Chapter 12	•	
	12.1 DC Power	41
Chapter 13	Troubleshooting	42

1.1 Important Safeguards

Chapter 1

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

Any product, on which the serial number has been defaced, modified or removed.
Damage, deterioration or malfunction resulting from:
□ Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
☐ Repair or attempted repair by anyone not authorized by us.
☐ Any damage of the product due to shipment.
☐ Removal or installation of the product.
☐ Causes external to the product, such as electric power fluctuation or failure.
☐ Use of supplies or parts not meeting our specifications.
□ Normal wear and tear.
☐ Any other causes which does not relate to a product defect.
Removal, installation, and set-up service charges.

1.2 Regulatory Notice

Chapter 1

Legal Information

First English printing, October 2002

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

Safety Instructions

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the drawer is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equip ment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

1.3 Before Installation

Chapter 1

- It is very important to locate the Rackmount LCD Drawer / Display in a suitable environment.
- The surface for placing and fixing the Rackmount LCD Drawer / Display should be stable and level or mounted into a suitable cabinet.
- Make sure the place has good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.
- Convenience for connecting the Rackmount LCD Drawer / Display to the related facilities should be well considers too.

1.4 Unpacking

The Rackmount LCD Drawer / Display comes with the standard parts shown on the package contents. Check and make sure they are included and in good condition. If anything is missing, or damage, contact the supplier immediately.

1.5 Optional Accessories

1. Power Cord

- 1.1 IEC power cord
- 1.2 NEMA 5-15 power cord (US)
- 1.3 BS 1363 power cord (UK)
- 1.4 CEE 7/4 power cord (German)
- 1.5 AS 3112 power cord (Australia)



1.6 Peripheral Products

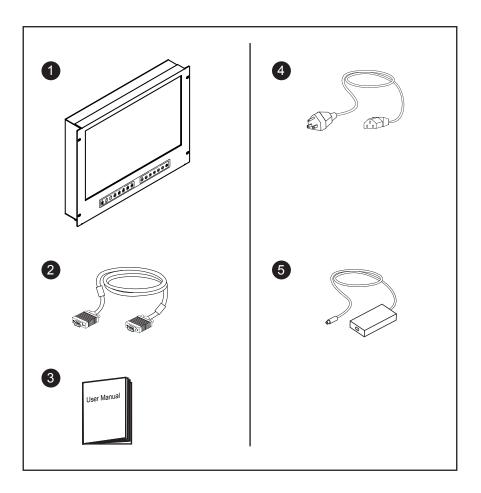
Chapter 1

Item	Model No.	Description		
Matrix Cat6 KVM	MU-1602 / MU-1603 / MU-1604 MU-IP1613 / MU-IP1614 / MU-IP1624 MU-3202 / MU-3203 / MU-3204 MU-IP3213 / MU-IP3214 / MU-IP3224	Matrix Cat6 16 port KVM Matrix IP Cat6 16 port KVM Matrix Cat6 32 port KVM Matrix IP Cat6 32 port KVM		
Matrix DB-15 KVM	M-802 / M-803 / M-804 M-IP813 / M-IP814 / M-IP824 M-1602 / M-1603 / M-1604 M-IP1613 / M-IP1614 / M-IP1624	Matrix DB-15 8 port KVM Matrix IP DB-15 8 port KVM Matrix DB-15 16 port KVM Matrix IP DB-15 16 port KVM		
Combo Cat6 KVM	U-801 / U-802 / U-IP802 U-1601 / U-1602 / U-IP1602 U-3201 / U-3202 / U-IP3202	Combo Cat6 8 port KVM Combo Cat6 16 port KVM Combo Cat6 32 port KVM		
Combo DB-15 KVM	CV-S801 / CV-802 / IP-802 CV-S1601 / CV-1602 / IP-1602	Combo DB-15 8 port KVM Combo DB-15 16 port KVM		
PS/2 DB-15 KVM	CV-401 / CV-801 / CV-1601	4 / 8 / 16 port PS/2 DB-15 KVM		
Keyboard Drawer	RK-1 RK-2	Rackmount keyboard drawer (with KVM options) Rackmount keyboard drawer (short depth version)		

2.1 Package Contents

Chapter 2

RP-W819QD & RP-W922QD

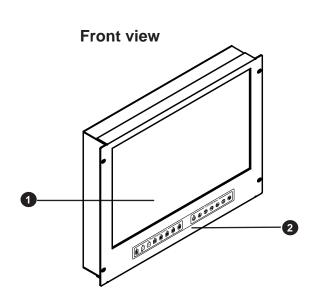


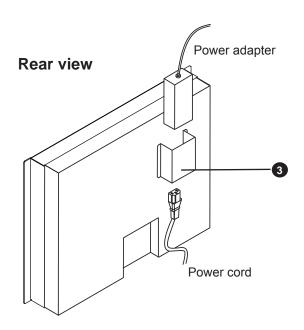
- 1 Rackmount LCD display x 1 pc
- 2 6' VGA cable (male to male) x 1 pc
- 3 User manual x 1 pc
- 4 Power cord x 1 pc
- **5** Auto switch power adapter x 1 pc

2.2 Structure Diagram

Chapter 2

RP-W819QD & RP-W922QD





- 1 LCD interchangeable module kit
- 2 2-in-1 LCD + Quad display membrane
- 3 Power adapter bracket

2.3 Installation

Chapter 2

RP-W819QD

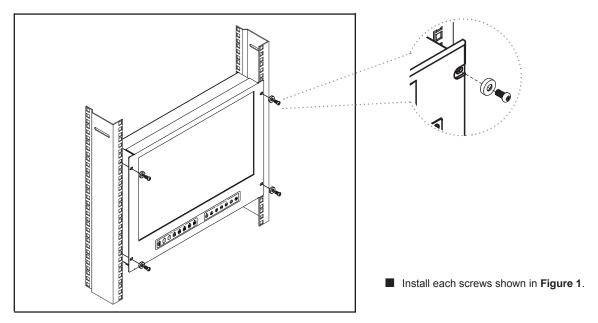


Figure 1.

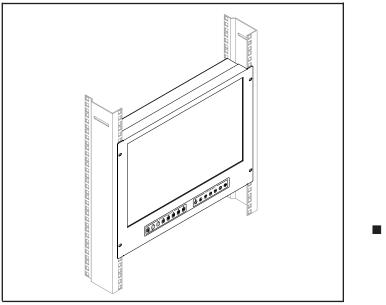


Figure 2.

Fixed the LCD into the rack.

* M6 screws is not provided.

2.3 Installation

Chapter 2

RP-W922QD

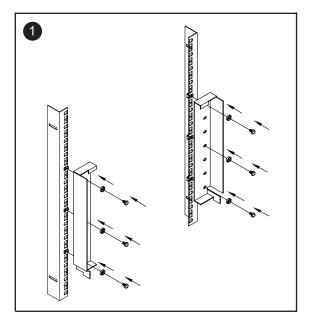


Figure 3.

- Install each screws shown in Figure 3.
 - * M6 screws is not provided.

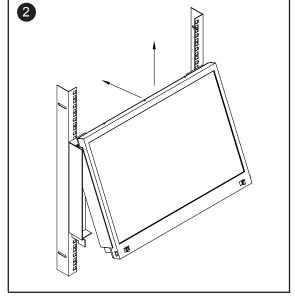


Figure 4.

■ Insert the upper part of the LCD display to the rack shown in **Figure 4**.

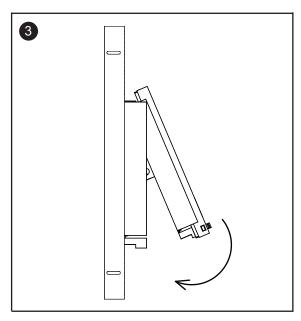


Figure 5.

■ Push the lower part of the LCD into the rack.

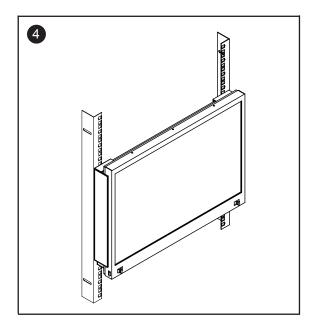
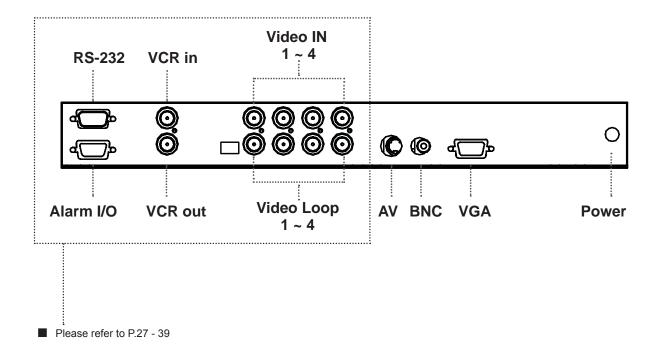


Figure 6.

Installation completed.

2.4 Connection Chapter 2

RP-W819QD & RP-W922QD



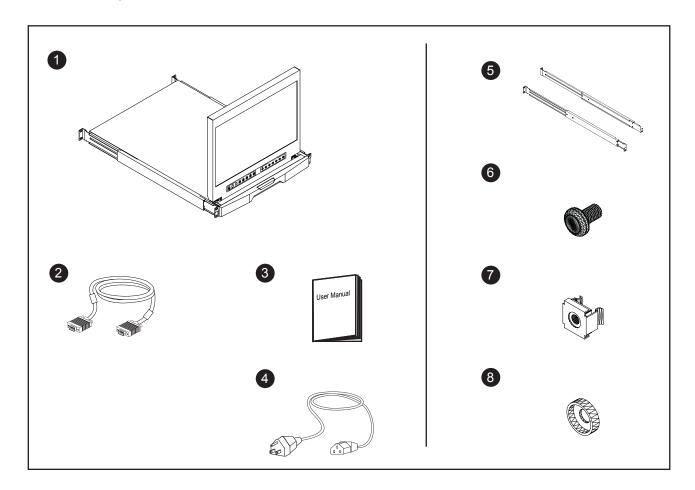


Caution: The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage of the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest that turn off power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer receiving power. The company is not responsible for damage caused in this way.

3.1 Package Contents

Chapter 3

RP-W119QD

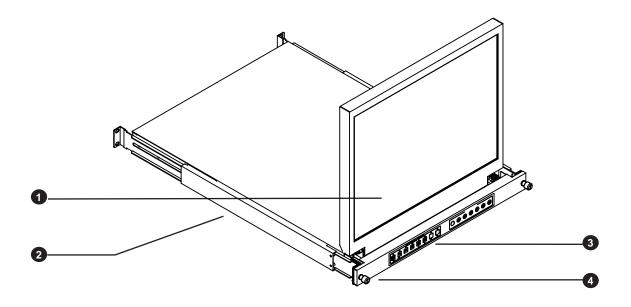


- 1 LCD drawer x 1 pc
- 2 6' VGA cable (male to male) x 1 pc
- 3 User manual x 1 pc
- 4 Power cord x 1 pc
- **(5)** Mounting bracket x 2 pcs
- 6 M6*15mm screw x 8 pcs
- 7 M6 cage nut x 8 pcs
- 8 M6 washer x 8 pcs

3.2 Structure Diagram

Chapter 3

RP-W119QD



- 1 LCD interchangeable module kit
- ② "One Man" Installation Slides

- 3 LCD + Quad display membrane
- 4 Thumb Screw

3.3 How to Use the Slides

Chapter 3

RP-W119QD

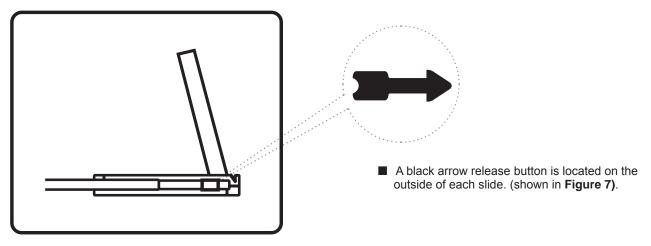


Figure 7.

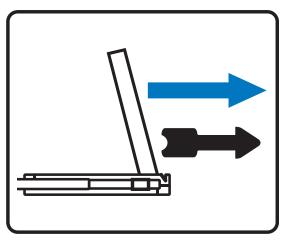


Figure 8.

■ Pull and hold the black arrow button on either side of the LCD drawer to unlock. (shown in **Figure 8**).

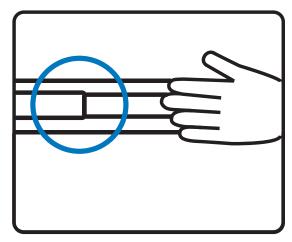


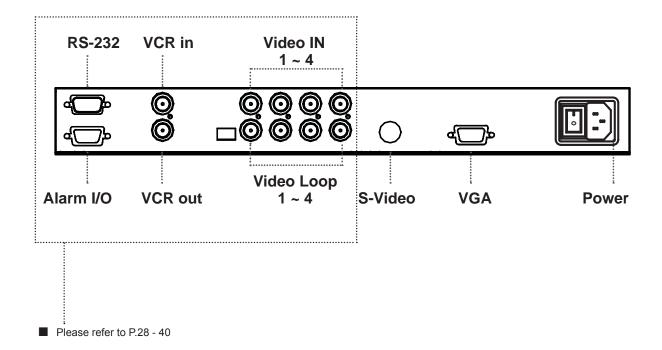
Figure 9.

■ Push the LCD drawer into the rack. (shown in Figure 9).

Caution: Keep your fingers away from the slide stop

3.4 Connection Chapter 3

RP-W119QD





Caution: The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage of the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest that turn off power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer receiving power. The company is not responsible for damage caused in this way.

Chapter 4

4.1 LCD Specifications

RP-W922QD, RP-W819QD & RP-W119QD

Item	Description			
Diagonal Size	19" TFT	22" TFT		
Max. Resolution	1440 x 990	1680 x 1050		
Brightness (cd/m²)	300	300		
Color Support	16.7 M	16.7 M		
Contrast Ratio (typ.)	1000:1	1000:1		
Viewing Angle (H/V)	160° x 160°	170° x 160°		
Display Area (mm)	408 x 255	474 x 296		
Tr Response Time (ms)	1.3	3.6		
LCD Panel MTBF (hrs)	50,000	50,000		
VGA Signal Input	Analog RG	B, 0.7Vp-p		
Sync. Type	Separate H/V, C	Composite, SOG		
	720 x 400, 70 Hz			
	640 x 480, 60/ 70/ 72/ 75 Hz			
	800 x 600, 60/ 70/ 72/ 75 Hz			
Resolution	1024 x 768, 60/ 70/ 75 Hz			
Resolution	1152 x 864, 60/ 70/ 75 Hz			
	1280 x 720, 60/ 75 Hz	1280 x 720, 60/ 70/ 75 Hz		
	1280 x 1024, 60/ 75 Hz	1280 x 1024, 60/ 70/ 75 Hz		
	1440 x 990, 60 Hz	1680 x 1050, 60 Hz		
Plug & Play DDC	EDID 1.3			
Connector	DB-15 connector			
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz			
Power Consumption	Max. 48 Watt, Standby 5 Watt			
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.			

Options

DC Power	DC power input with 12V, 24V, 48V selection
----------	---

Environmental

Operation	0° to 50°C Degree
Storage	-5° to 60°C Degree
Relative Humidity	5~90%, non-condensing
Shock	10G acceleration (11ms duration)
Vibration	5~500Hz 1G RMS random vibration

5.1 Dimensions Chapter 5

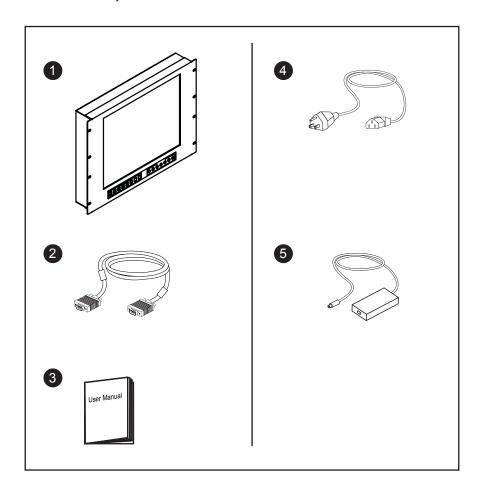
RP-W922QD, RP-W819QD & RP-W119QD

Model	Product Dimension (W x D x H)		Packing Dimension (W x D x H)	Net Weight	Gross Weight
RP-W922QD	500.4 x 70.5 mm 19.7 x 2.8"	9U	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	12 kg 26 lb	15 kg 33 lb
RP-W819QD	480 x 71.5 mm 18.9 x 2.8"	8U	565 x 495 x 156 mm 22.2 x 19.5 x 6.1"	8 kg 18 lb	10 kg 22 lb
RP-W119QD	442 x 650 x 44 mm 17.4 x 25.6 x 1.73"		581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	13 kg 29 lb	18 kg 40 lb

6.1 Package Contents

Chapter 6

RP-817QD, RP-919QD & RP-1020QD

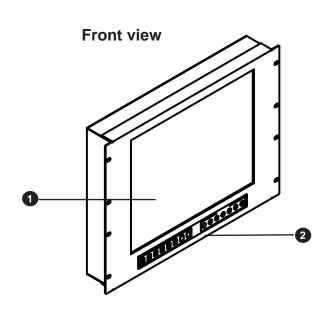


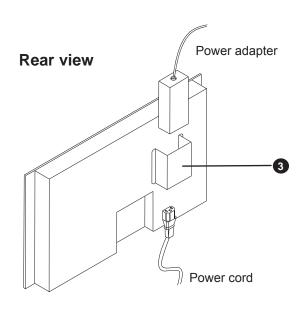
- 1 Rackmount LCD display x 1 pc
- 2 6' VGA cable (male to male) x 1 pc
- 3 User manual x 1 pc
- 4 Power cord x 1 pc
- **5** Auto switch power adapter x 1 pc

6.2 Structure Diagram

Chapter 6

RP-817QD, RP-919QD & RP-1020QD





- 1 LCD interchangeable module kit
- 2 LCD + Quad display membrane
- 3 Power adapter bracket

6.3 Installation Chapter 6

RP-817QD, RP-919QD & RP-1020QD

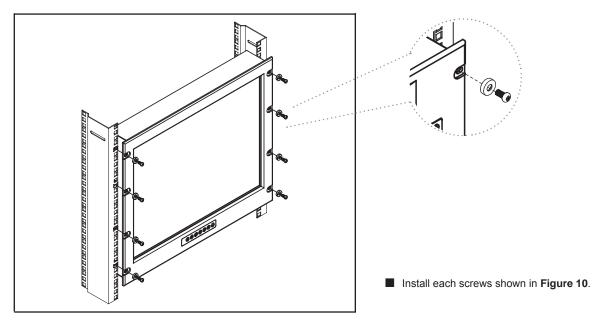


Figure 10.

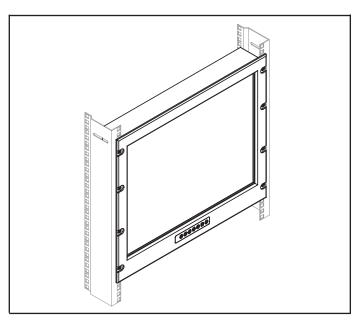


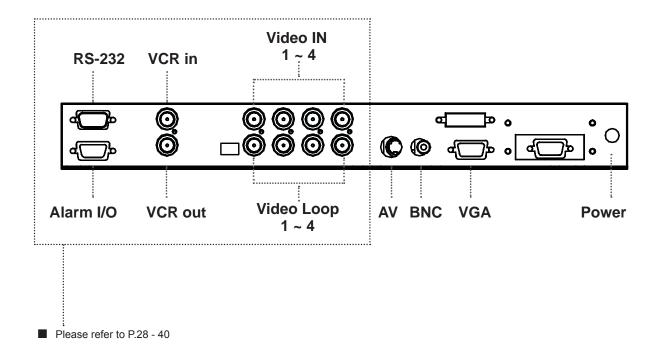
Figure 11.

Fixed the LCD into the rack.

* M6 screws is not provided.

6.4 Connection Chapter 6

RP-817QD, RP-919QD & RP-1020QD



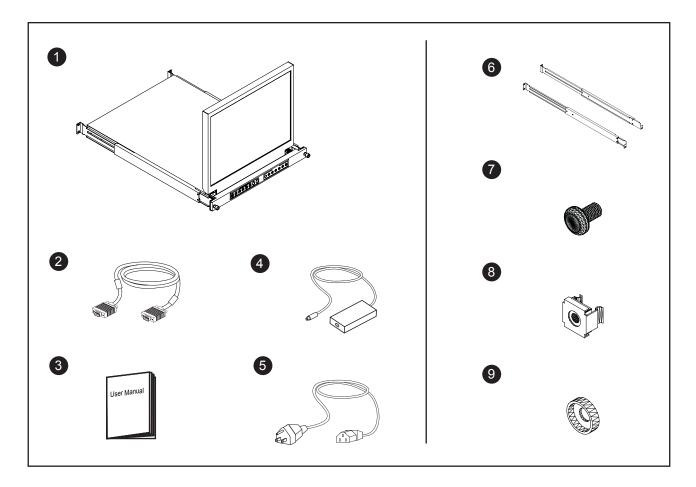


Caution: The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage of the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest that turn off power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer receiving power. The company is not responsible for damage caused in this way.

7.1 Package Contents

Chapter 7

RP-117QD, RP-119QD & RP-120QD

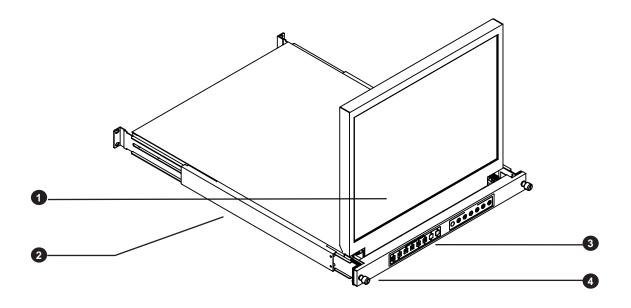


- 1 LCD drawer x 1 pc
- 2 6' VGA cable (male to male) x 1 pc
- 3 User manual x 1 pc
- 4 Auto switch power adapter (for external power version) x 1 pc
- **⑤** Power cord x 1 pc
- 6 Mounting bracket x 2 pcs
- M6*15mm screw x 8 pcs
- 8 M6 cage nut x 8 pcs
- 9 M6 washer x 8 pcs

7.2 Structure Diagram

Chapter 7

RP-117QD, RP-119QD & RP-120QD



- 1 LCD interchangeable module kit
- ② "One Man" Installation Slides

- 3 LCD + Quad display membrane
- 4 Thumb Screw

7.3 How to Use the Slides

Chapter 7

RP-117QD, RP-119QD & RP-120QD

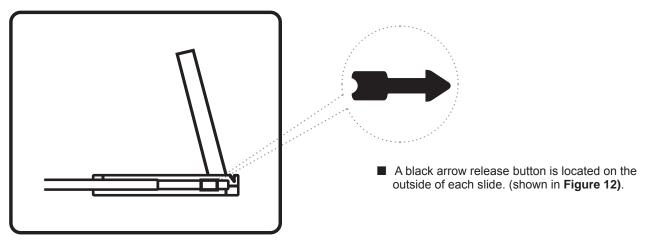


Figure 12.

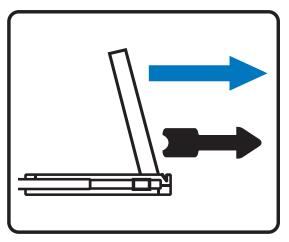


Figure 13.

■ Pull and hold the black arrow button on either side of the LCD drawer to unlock. (shown in Figure 13).

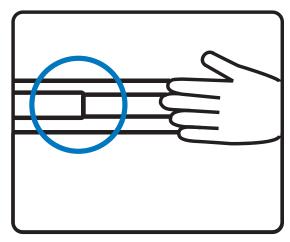


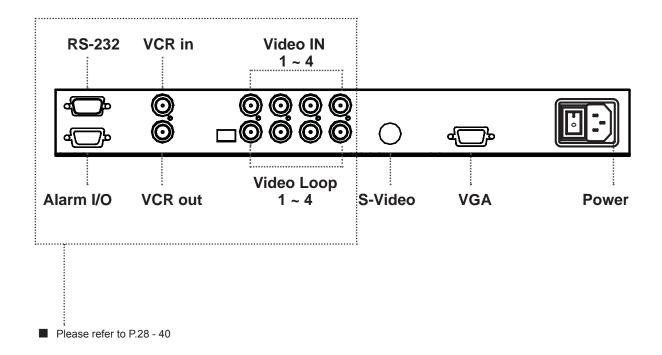
Figure 14.

■ Push the LCD drawer into the rack. (shown in **Figure 14)**.

Caution: Keep your fingers away from the slide stop

7.4 Connection Chapter 7

RP-117QD, RP-119QD & RP-120QD





Caution: The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage of the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest that turn off power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer receiving power. The company is not responsible for damage caused in this way.

8.1 LCD Specifications

RP-817QD, RP-919QD, RP-1020QD, RP-117QD, RP-119QD & RP-120QD

Item	Description				
LCD Manufacturer	SAMSUNG				
Diagonal Size	17" TFT 19" TFT 20" TFT				
Max. Resolution	1280 x 1024	1280 x 1024	1600 x 1200		
Brightness (cd/m²)	300	300	300		
Color Support	16.7 M	16.7 M	16.7 M		
Contrast Ratio (typ.)	1000:1	1000:1	800:1		
Viewing Angle (H/V)	160° x 160°	160° x 160°	160° x 160°		
Display Area (mm)	338 x 270	376 x 301	408 x 306		
Tr Response Time (ms)	1.3	1.3	1		
LCD Panel MTBF (hrs)	50,000	50,000	50,000		
VGA Signal Input		Analog RGB, 0.7Vp-p			
Sync. Type		Separate H/V, Composite, SOO	G		
	720 x 400, 70 Hz				
	640 x 480,	640 x 480, 60/ 70/ 72/ 75 Hz			
	800 x 600, 60/ 70/ 72/ 75 Hz				
	1024 x 768, 60/ 70/ 75 Hz				
Resolution	1152 x 864, 60/ 70/ 75 Hz				
	1280 x 720	1280 x 720, 60/ 75 Hz			
	1280 x 1024, 60/ 70/ 72/ 75 Hz		1280 x 1024, 60/ 70/ 75 Hz		
		-	1440 x 1050, 60 Hz		
		-	1600 x 1200, 60 Hz		
Plug & Play DDC		EDID 1.3			
Connection	DB-15 connector				
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz				
Power Consumption	Max. 48 Watt, Standby 5 Watt				
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.				
Regulation Approval	FCC, CE				

Options

DC Power	DC power input with 12V, 24V, 48V selection
----------	---

Environmental

Operation	0° to 50°C Degree
Storage	-5° to 60°C Degree
Relative Humidity	5~90%, non-condensing
Shock	10G acceleration (11ms duration)
Vibration	5~500Hz 1G RMS random vibration

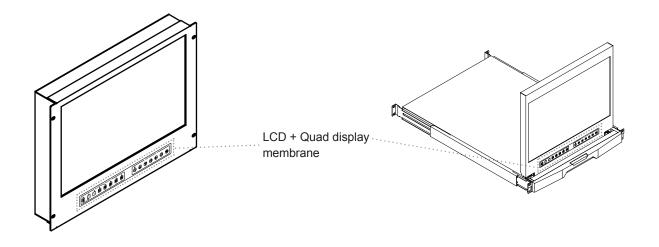
9.1 Dimensions Chapter 9

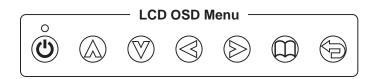
RP-817QD, RP-919QD, RP-1020QD, RP-117QD, RP-119QD & RP-120QD

Model	Product Dimension (W x D x H)		Packing Dimension (W x D x H)	Net Weight	Gross Weight
RP817QD series	480 x 71.5 mm		565 x 495 x 156 mm	8 kg	10 kg
	18.9 x 2.8" 8U		22.2 x 19.5 x 6.1"	18 lb	22 lb
RP919QD series	480 x 71.5 mm		565 x 539 x 156 mm	12 kg	15 kg
	18.9 x 2.8" 9U		22.2 x 21.2 x 6.1"	26 lb	33 lb
RP1020QD series	480 x 71.5 mm 18.9 x 2.8"	10U	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	16 kg 35 lb	20 kg 44 lb
RP117QD series	442 x 600 x 44.2 mm		581 x 755 x 172 mm	12 kg	17 kg
	17.4 x 23.6 x 1.74"		22.9 x 29.7 x 6.8"	17 lb	37 lb
RP119QD series	442 x 600 x 44.2 mm		581 x 755 x 172 mm	13 kg	18 kg
	17.4 x 23.6 x 1.74"		22.9 x 29.7 x 6.8"	29 lb	40 lb
RP120QD series	442 x 650 x 44.2 mm		589 x 856 x 168 mm	14 kg	19 kg
	17.4 x 25.6 x 1.74"		23.2 x 33.7 x 6.8"	31 lb	42 lb

10.1 On-screen Display Operation

Chapter 10





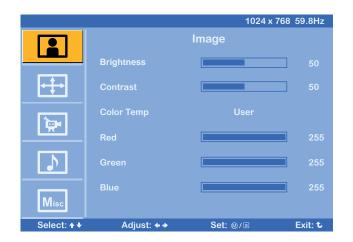
For LCD OSD Menu

Membrane Switch	Function			
0	Power light Green = On Orange = Power saving			
	Power on / off LCD			
m	Display the OSD menu			
	Scrolls through menu options and adjusts the displayed control			
	Exit the OSD screen Shortcut key to auto adjustment by pressed the button for 5 seconds Of Toggle analog, digital & video connection (DVI-D and video options only)			

For Quad Display Control

Remarks:

■ Quad Display Control please refer to P.39 - 44

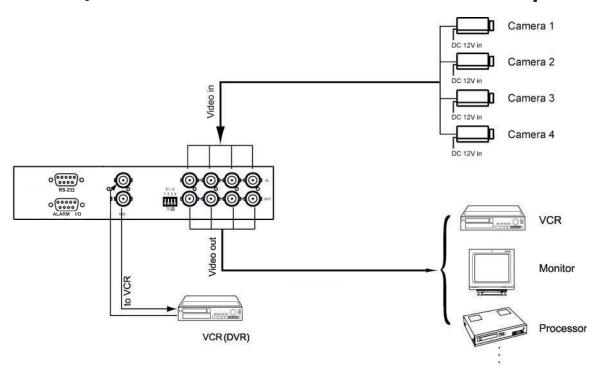


OSD Configuration Page

	Image: To enter into the brighness, contrast, color temp, red, green, and blue
	Geometry: To enter into the auto adjust, H position, V position, phase and clock
	Video:
	Audio: To enter into volume, mute and power save
Misc	Misc: To enter into the language, OSD position, graphic mode, OSD time, ratio and reset

11.1 Basic System Connection

Chapter 11



1. VCR in:

This BNC connector is connected to video output from VCR/DVR. A pre-recorded quad screen signal from a tape can be played back through a VCR/DVR and displayed on the video output channels. Push the VCR button (#2) to switch the device to VCR Playback mode.

2. VCR out:

This BNC connector is to be connected to the Video in from your VCR/DVR. It will only provide a quad screen video to ensure an un-interrupted video recording for all four cameras. The display video is not affected by the control panel.

3. Terminations:

These impedance switches are used to provide proper termination for each camera input. These switches toggle between 75Ω and Hi-Z impedance. Incorrect termination will degrade the quality of the video signal. All video inputs not "looped through" to another device, the corresponding switches need to be set to 75Ω termination position. If another device is connected to video out loop through connector set the corresponding termination switch to Hi-Z position. Any device connected to the video out loop through connectors needs to be configure to 75Ω video termination. The factory default termination setting is 75Ω .

4. Ch1 In, Ch2 In, Ch3 In, and Ch4 In Video IN connectors :

These BNC connectors are used to connect to the video out from camera. Four cameras can be connected to these connectors to form a quad screen in the following mapping order.

1	2
3	4

5. Ch1 Out, Ch2 Out, Ch3 Out, and Ch4 Out Video Loop through connectors :

These connectors are used to loop video signals from each camera out to other devices.

11.2 ALARM I/O Connection & Operation

Chapter 11

1. ALARM I/O:

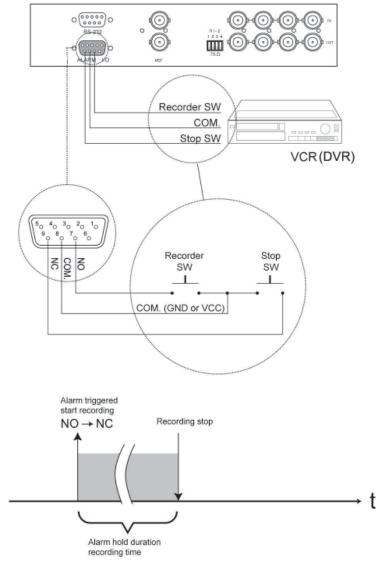
This female type 9 pin D-sub connector is used for alarm sensor input and alarm output control connections. It provides Normal Open and Normal Close contacts for alarm out control.

	Pin Assignment for Alarm Connector (female type)				
PIN#		PIN#		PIN#	
1	Sensor 1	4	Sensor 4	7	Normal Open Contact
2	Sensor 2	5	Reset In	8	Common Contact
3	Sensor 3	6	GND	9	Normal Close Contact

The Alarm Hold Time can be configured from 0 second to 99 minutes for FIO-8037 / FIO-8134 through system Setup menu.

2. VCR Connection for Tape Recording Start and Stop Control:

Connecting the contacts of VCR RECORD and STOP switch to the alarm output NC and NO contacts will allow you to use an ordinary VCR to record for longer period of time. Combined with alarm sensor detection, the VCR will record only when an alarm sensor is activated.



- *. If more than one sensor have been trigged, VCR will start to record after the last trigged event.
- *. In order to make use of the alarm called full screen display function, the VIDEO IN connector from the VCR has to be connected to LIVE monitor connector of the device. If more than one sensor are trigged, VCR will then record all the events in full screen mode accordingly.

3 Sensor Activated Alarm

The unit is equipped with 4 alarm sensor inputs. If any alarm is activated:

- the built-in buzzer will be activated.
- the quad will switch the corresponding channel indicator LED to blinking mode.
- a warning message depending on different models will be displayed as follows:

Quad output channel (#4)		LIVE output channel (#5)			
			<u> </u>		
	Alarm				
				Alarm	
Blinking Alarm & Title message on the activated channel in quad screen			n display of the activa ay a blinking Alarm m		

Above mentioned alarm can be cleared by: If the device is operated under Security Lock ON mode, Push Lock button for 2 seconds to disable the function then push any button in the front panel.

4 Video Loss Alarm

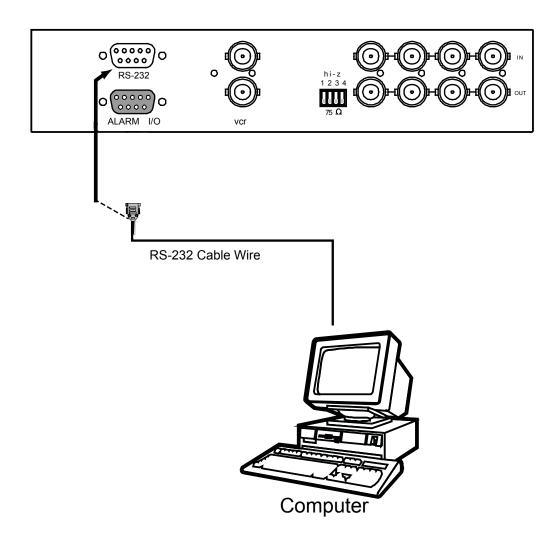
Loss of video at any input is automatically detected by the device. The device will:

- Activate the built-in buzzer.
- Switch the corresponding channel indicator LED to blinking mode.
- Display warning message on quad screen:

Quad output channel (#4)				
			•	
	Video loss			
			l	

Blinking Video Loss & Title message on the activated channel in quad screen

The warning message and the buzzer can be cleared by pushing Lock button (#2) for more than 4 seconds if the device is operated under Security lock On mode, or pushing any button on the front panel if the device is operated under Security lock OFF mode.



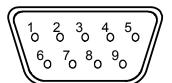
11.3 Remote Control Connection & Operation

Chapter 11

The device may be controlled via the male type 9 pin D-sub/RS-232 connector (#13) from a RC-5002 keypad, terminal or computer using ASCII code.

Note: Please power off the unit before connecting the Remote Control keypad.

1. Pin assignment of the male type 9 pin D-sub connector:



Pin Assignment for Remote Control Connector					
1	GND	4	NC	7	VCC
2	RX	5	NC	8	GND
3	TX	6	VCC	9	GND

When a computer is used to control this device through a RS-232 port, pin 6, 7, 8, and 9 must be disconnected to prevent connecting the VCC and GND signals from the device to the computer. A RS-232 port only uses pin 1, 2, and 3 for control signal transmission.

- 2. A terminal or computer can be connected to the male type 9 pin D-sub connector on the real panel from it RS-232 port to control this device using standard, uppercase ASCII codes.
 - 2.1 The ASCII command codes for the quad are listed in the table below. The transmission protocol is 1200-baud rate, 8 data bit, 1 start bit, 1 stop bit, and no parity.

Function	ASCII Command Code		
Quad Screen Display	E		
CH 1	A		
CH 2	В		
CH 3	С		
CH 4	D		
Freeze *1	EA, EB, EC, ED		
Auto Switching Sequence	F		
VCR/Live	G		
Key Lock *2	Н		
Setup Menu *3	GH		
Text Select Down *4	(GH) A		
Text Select Up	(GH) B		
Cursor Left	(GH) C		
Cursor Right	(GH) D		
Alarm Reset	I		

11.3 Remote Control Connection & Operation

Chapter 11

*1. For FIO-8037: in order to control the device to operate in Zoom mode, the computer has to first send command code " to switch the signal source from camera to VCR/DVR, at this time the device will automatically zoom channel 1 video from VCR/DVR to full screen. User can then input a corresponding channel code to zoom any other specific channel. Input the corresponding channel code again to put the specific channel to freeze mode and send the code again to clear the freeze mode.

Example: Input GE, (GE) B, (GE) C, and (GE) D for zooming the video signal in channel 1 to 4 from VCR/DVR. Input "A", "B", "C", "D" again to freeze the specific channel. Send command code "G" again to get back to Live input mode.

- *2. Computer has to send out command code "H" continuously for 2 seconds to switch the device between security lock ON and OFF mode. If any alarm is activated under security lock ON mode, the device has to send out command code "H" continuously for more than 4 seconds to clear the alarm.
- *3. Setup menu is switched ON by sending VCR/DVR and Lock button codes together.
- *4. Text Select and Cursor Control functions can be performed only under menu Setup mode.
- 2.2 Right after computer/terminal has sent out the above mentioned control command code to the device, the devic will respond with following status code back to computer through RS-232 port:

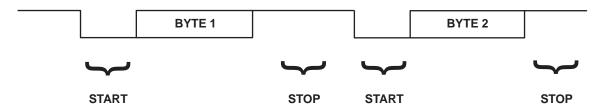
Status Code	Quad Status	Status Code	Quad Status
EF	Device in Quad mode	DE	CH1 in Sequence mode
EE	CH1 in Freeze mode	DD	CH2 in Sequence mode
ED	CH2 in Freeze mode	DB	CH3 in Sequence mode
EC	CH1 & 2 in Freeze mode	D7	CH4 in Sequence mode
EB	CH3 in Freeze mode	CF	Quad display in Sequence mode
EA	CH1 & 3 in Freeze mode		
E9	CH2 & 3 in Freeze mode	Е	CH1 in Full screen mode
E8	CH1, 2, & 3 in Freeze mode	D	CH2 in Full screen mode
E7	CH4 in Freeze mode	В	CH3 in Full screen mode
E6	CH1 & 4 in Freeze mode	7	CH4 in Full screen mode
E5	CH2 & 4 in Freeze mode		
E4	CH1, 2 & 4 in Freeze mode		Attach to above code
E3	CH3 & 4 in Freeze mode	XX-DF	Buzzer/VCR ON
E2	CH1, 3, & 4 in Freeze mode	XX-7F	Security lock ON
E1	CH2, 3, & 4 in Freeze mode	XX-3F	Buzzer & Security lock ON (Stop)
E0	CH1, 2,3, & 4 in Freeze mode		

11.3 Remote Control Connection & Operation

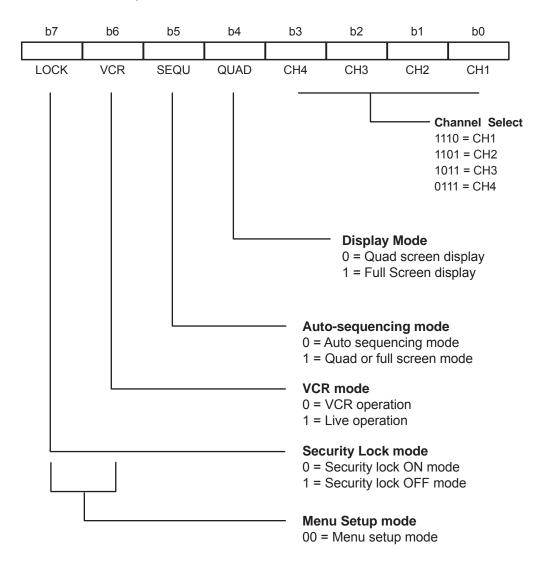
Chapter 11

2.3 The configuration of the status code for both normal and alarm operations:

There are total 2 bytes of the status codes. Byte one, the first 8 bits, shows the current status of the operation modes that the unit is in. Byte two, the second 8 bits, shows the current status of the alarm operations of the unit.



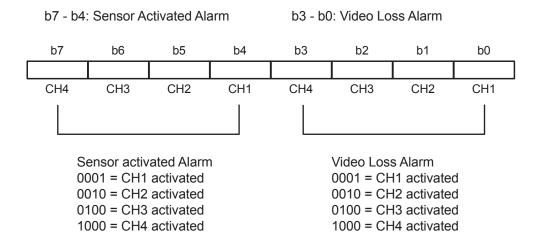
BYTE 1: Status code for normal operation modes



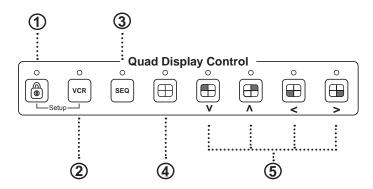
11.3 Remote Control Connection & Operation

Chapter 11

BYTE 2: Status code for alarm operations: The first 4 bits show the sensor activated alarm status of each channel; next 4 bits show the video loss alarm status of each channel. The digit "1" means alarm event is detected, and "0" means no alarm event is detected.



Chapter 11



- ① Lock: Security locks out button. Push this button for 2 seconds to enable control panel lock out function. Push this button again for 2 seconds to disable the function.
- 2 VCR: Push this button to enter into VCR Playback/Zoom operation. In this mode, the output video is displaying the video signal from VCR. When operated in Full Screen display mode, push select buttons (#5) to zoom any specific camera signal pre-recorded on the tape in quad format. Push the select button (#5) again to freeze the expanded picture on the screen.

VCR button (#2)	Quad button (#4)	CH Select button (#5)	Function	
ON	ON	OFF	Display quad video signal from VCR tape	
ON	OFF	Push Once	Call up specific quadrant from tape in full screen mode	
ON	OFF	Push Twice	Freeze specific quadrant from tape in full screen mode	
OFF	Х	Х	Exit VCR operation and back to normal operation mode	

#1, #2 Setup buttons: Push these two buttons simultaneously to get into Menu Setup mode and display page 1 of system setup menu. Push these two buttons simultaneously again to display page 2 of the setup menu. Use page 1 to program time/date and camera title and page 2 to configure alarm operations. Under menu setup mode, Channel Select buttons (#5) are used for cursor control and text selection to program the setup menu. Push the setup buttons simultaneously again to save the setting. Push the setup buttons fourth time to get back to ordinary operation mode.

Satur buttons (#4 #2)	Function	CH Select buttons (#5)		
Setup buttons (#1, #2)	Function	UP, DOWN	< , >	
Push once	Page 1 menu for time / date / title programming	Text Selection	Cursor Control	
Push twice	Page 2 menu for alarm configuration	Text Selection	Cursor Control	
Push the third time	Save the settings	Yes / No		
Push the fourth time	Exit setup mode, back to norrnal			

- 3 Sequ.: Push this button to enable full page auto sequencing mode. Push this button again to disable it...
- 4 : Push this button to switch between Quad/ Full Screen display mode.
- 5 buttons: When operated in Quad mode, these buttons are used to freeze any specific camera by pushing the corresponding button. When operated in Full Screen display mode, these buttons are used to select specific camera to be displayed in full screen.

Quad button (#4)	Channel Select buttons (#5)	Function
ON	ON	Freeze specific camera video in Quad screen mode
OFF	ON	Call up specific camera video in full screen mode

These buttons are also used as cursor control and text select keys under Setup menu mode.

Right after the unit is turned on, The monitor will display the last setting on the Setup Menu.

1. Page 1 of the Setup Menu - Display Setting

Push Setup buttons (#1, #2) simultaneously to display the Setup Menu on the screen. There are total two pages in the Setup Menu. Page 1 is used to program TIME, DATE, and camera TITLE. Page 2 is used to program Alarm Operations. Under this mode, channel selection buttons (#5) on the front panel are used for cursor control and text selection. Use the cursor control buttons "<" and ">" to move the cursor to the location as desired to program, and use the text select buttons " < " and " v" to choose the right alphanumeric character to program.

Page 1: Setting the TIME, DATE, TITLE, and DWELL time:

CH	TITLE		DWELL	TIME
	QUAD			03S
1	CH 1			03 S
2	CH 2			03 S
3	CH 3			03 S
4	CH 4			03 S
LIVE VID	EO FREEZE			ON
VIDEO O	UT:	LIVE		QUAD
TITLE:		ON		ON
TIME: 23: 10: 10		ON		ON
DATE: 12 - 25 - 2003		ON		ON

1.1 TITLE setup:

The Title menu permits the setup of separate titles for each video channel. 8 characters may be entered for each video channel. The available alphanumeric characters are:

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D,.... X, Y, Z, . , :, - , / , < , > , \, , \, space ,

1.2 DWELL Time setup:

The Dwell time menu permits setting the dwell time for all cameras and the Quad Screen on the LIVE output channel. The menu shows a table of all cameras and associated dwell time. Dwell time can be programmed by setting a number between 00 to 99 for each channel in the menu.

- 01 through 99: Adds the camera input to the auto switching SEQUENCE, with the corresponding dwell time in seconds.
- 00: Skips the camera input in the auto switching SEQUENCE.

1.3 TIME/DATE setup:

Time and date information can be displayed on the video output channel through both LIVE and QUAD connector. Bottom of page 1 is used to set the values of time and date and also to enable or disable the display at each output channel.

The date and time will display in the "MM-DD-YYYY HH:MM:SS" format for NTSC model and "DD-MM-YYYY HH:MM:SS" format for PAL model.

1.4 TITLE/TIME/DATE disable and enable on LIVE and QUAD video output channel:

The Title/Time/Date display on each output channel can be enabled or disabled by setting ON or OFF in the corresponding entry.

11.5 Quad Display On-screen Menu

Chapter 11

2 Page 2 of the setup menu- Alarm Setting

Push Setup buttons (#1, #2) simultaneously and push (#1) button again to display page 2 of the setup menu on the screen. This Alarm Setting menu is used to set the desired alarm configuration like buzzer, V-loss alarm and V-loss relay.

	ALARM SE	TTING			
CH	SENSOR	TYPE	STATUS		
1	OPEN	NO	ON		
2	OPEN	NO	ON		
3	OPEN	NO	ON		
4	OPEN	NO	ON		
SENSITIVITY: 0.3 S					
DURATION: 30 S					
BUZZER:			ON		
V-LOSS ALARM:			ON		
V-LOSS F	RELAY:		OFF		

2.1 Sensitivity:

The features are not applicable in these model.

2.2 Alarm Hold Duration:

The features are not applicable in these model.

2.3 Buzzer:

The device has a build-in buzzer to signal a detected alarm through sound. User can choose to disable the buzzer by setting it to OFF.

2.4 V-Loss Alarm:

This entry is used to enable or disable the video loss alarm. The device automatically detects loss of video at any input if this entry is set to ON. User can choose to disable this feature by setting it to OFF for applications like video conferencing or others that will need constant video source switching.

2.5 V-Loss Relay Control:

The device is equipped with an alarm controlled relay, which can be activated by both sensor trigged alarm and video loss alarm. This entry allows user to disable the relay activation from a loss of video in any camera input.

3 Save the settings and exit Setup Menu mode

Push (#1) button again will allow you to save the settings and go back to the normal operation mode and show a quad display on the screen.

11.5 Quad Display On-screen Menu

Chapter 11

4: The setup menu can be reset to factory setting by pushing the Setup buttons (#1, #2) and power on the quad simultaneously. The factory setting is as follows:

CH	TITLE		DWELL	TIME		ALARM	SETTING	
	QUAD			03S	СН	SENSOR	TYPE	STATU
1	CH 1			03 S	1	OPEN	NO	ON
2	CH 2			03 S	2	OPEN	NO	ON
3	CH 3			03 S	3	OPEN	NO	ON
4	CH 4			03 S	4	OPEN	NO	ON
LIVE \	/IDEO FREEZE			ON	SENSITIVITY:			0.3 S
VIDEC	OUT:	LIVE		QUAD	DURAT	ΓΙΟΝ:		30 S
TITLE		ON		ON	BUZZE	R:		ON
TIME:	23:10:10	ON		ON	V-LOS	S ALARM:		ON
DATE:	12 - 25 - 2003	ON		ON	V-LOS	S RELAY:		OFF
]			

5. The Quad Display Mode

- 5.1 Push Quad display button (#4) to switch between Quad screen and Full screen display mode. Right after you turn on the system, the unit is in the quad mode and displays cameras 1-4.
- 5.2 Use page 1 of the Setup menu to turn the Title display ON/OFF on each channel and also enable and disable the Time and Date display on LIVE and QUAD output channels.
- 5.3 Under Quad screen mode, push channel select button to freeze each camera input.

6. The Full Screen Display Mode

- 6.1 Push Quad button (#4) to OFF to enter Full screen display mode. Under this mode, you may call up any spe cific channel in full screen by simply pushing the corresponding channel selection button.
- 6.2 Push the Quad button (#4) to ON to return to the quad mode.

7. The Still Frame Display Mode

- 7.1 If the still screen mode is desired, first turn the quad display button (#4) to ON to set the unit to display in the quad mode. At this time you may press any of the four channel selection buttons (#5) to freeze the corresponding channel.
- 7.2 Under Zoom On VCR playback mode, if the unit is showing quad screen, pushing the channel selection but tons (#5) will call up the specific channel to display in full screen. Push the same channel selection button again to freeze that channel in full screen.

8. The Auto-Sequence Mode

Push the Sequence button (#3) to ON to set the device to work as a sequencer. Under this mode, the display sequence first starts with a quad screen and then continues to display each camera input in full screen, and then gets back to quad screen and so on. Press the Sequence button (#3) to OFF to release this mode.

11.6 VCR Operations

Zoom on VCR playback operation:

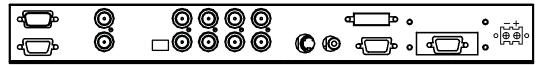
Push VCR button (#2) to ON will switch the device to VCR playback mode. Under this mode, if the device is on quad display mode, a pr-recorded quad display video in the tape will be shown on the screen. If the device is in Full screen display mode, push any channel select buttons (#5) will select and expand the corresponding quadrants of the pre-recorded video to full screen display.

11.7 Quad Display Specifications

	Item	Desc	ription		
Model Number		QD (NTSC)	QD (PAL)		
Number of Color		16.7 M	16.7 M		
Imaging System	n	NTSC PAL			
Resolution		1024 x 525	1024 x 625		
Refresh Rate		60	50		
Video Input	Camera Input	1.0 Vpp, 7	75 Ohm x 4		
video iriput	VCR Input	1.0 Vpp, 7	75 Ohm x 1		
	Live Monitor	1.0 Vpp, 7	75 Ohm x 1		
Video Output	Loop Through Out	1.0 Vpp, 75 Ohm x 4			
	VCR Output	1.0 Vpp, 75 Ohm x 1			
Auto Gain Cont	trol	Yes			
Time / Date		Yes			
On Screen Disp	olay	Yes			
Camera Title		8 Character Title			
	2 x Zoom On Playback	Y	'es		
Display Format	QUAD	Yes			
	FULL	Yes			
	SEQUENCY	Yes			
Dwell Time		0 to 99 Sec Adjustable			
Built-in Buzzer		Yes			
Key Lock		Yes			

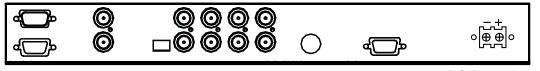
12.1 DC Power Options of the options

RP-W819QD & RP-W922QD RP-817QD, RP-919QD & RP-1020QD



DC Power input

RP-W119QD & RP-120QD



DC Power input

Model	12V	24V	48V
Input rating			
Input voltage:	12-Volt	24-Volt	48-Volt
Input range:	9 ~ 18V	18 ~ 36V	36 ~ 75V
Input current			
- No load	50 mA	50 mA	50 mA
- Full load	4950 mA	2450 mA	1220 mA
Output rating			
Output voltage:	12-Volt	12-Volt	12-Volt
Output current:	4.16A	4.16A	4.16A
Efficiency	84%	85%	85%

Remarks

■ Package does not include power cord and AC power adapter

13.1 Troubleshooting

Chapter 13

1. How do I adjust the resolution?

To change monitor resolution, click Start -> Control Panel -> Display. Select Setting tab to adjust the monitor resolution in Desktop Area. The available resolutions, "640 x 480", "800 x 600", "1024 x 768", "1152 x 864", "1280 x 1024", are determined by the display card in your computer.

2. Is interference signal appeared on LCD normal when shutting down the computer?

In rare cases, interference may appear on the monitor. This may be caused by signal rate of VGA card and is considered normal. The image quality can be improved by adjusting the phase or pixel rate automatically or manually.

3. The membrane power light is not ON

Press the power On / Off on LCD membrane to check if the monitor is in the ON mode. Check the power cord is properly connected to the LCD keyboard drawer and power outlet.

4. Screen image is not centered or sized properly

Press the houtton for two seconds to automatically adjust the image. Adjust the H-position and V-position settings via On-screen menu.



2805 E. Plano Parkway, Ste. 200 | Plano, TX 75074 | 972-272-6631 | Fax: 972-276-6484 www.rackmountsolutions.net | sales@rackmountsolutions.net

The company reserves the right to modify product specifications without prior notice and assumes no responsibility for any error which may appear in this publication.

All brand names, logo and registered trademarks are properties of their respective owners.

Copyright 2008 Austin Hughes Electronics Ltd. All rights reserved.